

## Neel S. Joshi

### (a) Professional Preparation

Harvey Mudd College	Chemistry	B.S. 2001
University of California, Berkeley	Organic Chemistry	Ph.D. 2006
Boston University	Biomedical Engineering and Macromolecular Chemistry	Postdoctoral Scholar, 2006-2009

### (b) Appointments

Assistant Professor, School of Engineering and Applied Sciences, Harvard University, 2010-  
Core Faculty Member, Wyss Institute for Biologically Inspired Engineering, Harvard University, 2010-

### (c) Publications

5 publications most closely related to the proposed project

1. Bansal, PN; Joshi, NS; Entezari, V; Grinstaff, MW; Snyder, BD "Contrast Enhanced Computed Tomography Can Predict the Glycosaminoglycan Content and Biomechanical Properties of Articular Cartilage." *Osteoarthritis and Cartilage* 18(2): 184-191. PMID: 19815108
2. Joshi, NS; Bansal, PN; Stewart, RC; Snyder, BD; Grinstaff, MW "The effect of Contrast Agent Charge on Visualization of Articular Cartilage Using Computed Tomography: Exploiting Electrostatic Interactions for Improved Sensitivity." *Journal of the American Chemical Society* 131(37): 13234-5. PMID: 19754183
3. Degoricija, LV; Bansal, PN; Sontjens, SHM; Joshi, NS; Takahashi, M; Snyder, BD; Grinstaff, MW "Hydrogels for Osteochondral Repair Based on Photocrosslinkable Carbamate Dendrimers." *Biomacromolecules*, 9(10): 2863-2872. PMID: 18800810
4. McFarland, JM; Joshi, NS; Francis, MB "Characterization of a Three-Component Coupling Reaction on Proteins by Isotopic Labeling and Nuclear Magnetic Spectroscopy." *Journal of the American Chemical Society* 2008, 130(24), 7639-7644. PMID: 18498164
5. Gilmore, JM; Scheck, RA; Esser-Kahn, AP; Joshi, NS; Francis, MB "N-Terminal Protein Modification Through a Biomimetic Transamination Reaction." *Angewandte Chemie International Edition*, 2006, 45(32), 5307-5311. PMID: 16847857

5 other significant publications

6. Nguyen, T; Joshi, NS; Francis, MB "An Affinity-Based Method for the Purification of Fluorescently-Labeled Biomolecules." *Bioconjugate Chemistry* 2006, 17(4), 869-872. PMID: 16848391
7. Joshi, NS; Whitaker, LR; Francis, MB "A Three Component Mannich-Type Reaction for Selective Tyrosine Bioconjugation." *Journal of the American Chemical Society* 2004, 126(49), 15942-15943. PMID: 15584710
8. Van Ryswyk, H; Moore, EE; Joshi, NS; Zeni, RJ; Eberspacher, TA; Collman, JP "Surface-Confined Metalloporphyrin Oligomers." *Angewandte Chemie International Edition* 2004, 43(43), 5827-5830. PMID: 15523726
9. XXX
10. XXX

### (d) Synergistic Activities

1. Member of the committee overseeing BioMOD, a summer research competition for undergraduates that focuses on bionanotechnology

### (e) Collaborators & Other Affiliations

Collaborators and Co-Editors:

Prashant N. Bansal, Beth Israel Deaconess Medical Center, Harvard Medical School, and Boston University  
Vahid Entezari, Beth Israel Deaconess Medical Center and Harvard Medical School  
Mark W. Grinstaff, Boston University  
Brian D. Snyder, Beth Israel Deaconess Medical Center and Harvard Medical School  
Rachel C. Stewart, Boston University

Lovorka Degoricija, Boston University  
Serge H. M. Sontjens, Boston University  
Masaya Takahashi, Boston University and Beth Israel Deaconess Medical Center  
Jesse M. McFarland, University of California, Berkeley  
Mathew B Francis, University of California, Berkeley  
Joshua M. Gilmore, University of California, Berkeley  
Rebecca A. Scheck, University of California, Berkeley  
Aaron P. Esser-Kahn, University of California, Berkeley  
Trung Nguyen, University of California, Berkeley

Undergraduate advisor:  
Hal Van Ryswyk, Harvey Mudd College

Graduate advisor:  
Mark W. Grinstaff, Boston University

Postdoctoral advisor:  
Mathew B Francis, University of California, Berkeley

Graduate students supervised (2 total):  
Zsofia Botyanszki, Harvard University  
Daniel Rubin, Harvard University

Postdoctoral scholars supervised (2 total)  
Glenna Meister, Harvard University  
Peter Nguyen, Harvard University